

ART. XI.—*New Australian Coleoptera, with Notes on
some previously described species. Part 2*

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[Read 10th August, 1922.]

PSELAPHIDAE.

Genus *Rybaxis*.

M. Raffray dealing with this genus in Junk's catalogue, after having transferred *electrica*, King, and *lunatica*, King, to *Anabaxis*, records nineteen species from Australia. Mr. A. M. Lea has described a further sixteen species bringing the total up to thirty-five. These, together with the five new species here dealt with, make the genus the third largest of the family in Australia. Having recently had occasion to prepare an up to date catalogue of the Pselaphidae, I find that we have, including my new forms, a grand total of 403 species.

The following three new species are all allied to *strigicollis*, Westw. They belong to Raffray's first group of the genus,¹ i.e., in which the transverse prothoracic furrow is well defined, and the median fovea very small or wanting. They are distinguished from all other Australian species of this group except *strigicollis*, by their curious prothoracic sculpture. Westwood, in describing *strigicollis*, refers to this sculpture as striolate. It consists of very distinct, irregularly longitudinal ridges, frequently running into each other, and thus forming enclosed areas, these being usually more noticeable anteriorly. The above form of sculpture is referred to as strigose in the following descriptions.

RYBAXIS STRIGICEPHALUS, n.sp.

♂ Dark castaneous, appendages and portion of elytra slightly paler. Upper surface clothed with minute pale pubescence, antennae and undersurface with longer pale pubescence.

Head large, slightly longer than wide, lightly narrowed before eyes, somewhat flattened on disc, declivous on sides and between antennae, sides incised about middle for the reception of eyes, these rather prominent, apical three-fourths coarsely longitudinally strigose, basal fourth with a few large punctures particularly at sides, with an obscure fovea on either side of middle at about basal fourth; antennae somewhat slender, joint 1 subcylindric, viewed from above wider than, and about twice as long as 2, 3 and 4, subequal, narrower than

1. Trans. Linn. Soc. N.S.W., 1900, Part II., p. 149.

2, 5 longer and a little wider than 4 or 6, 7 wider than 6, widened internally, 8 much shorter than 7, 9 much longer and wider than 8, 10 larger than 9, 11 about one and one-half longer than 10, lightly bent, bluntly pointed, and with a tubercle about middle on inner side beneath. Prothorax feebly transverse, strongly convex, sides strongly and evenly rounded almost to base, thence very lightly arcuate; base rounded, transversal groove strongly defined, a little widened in middle and terminating on either side in a large fovea; disc in front of groove coarsely longitudinally strigose as on head; behind groove with somewhat sparse but well-defined punctures. Elytra transverse, sides a little sinuate, widest just before apex, apical margin of each elytron a little produced about centre, sutural striae strongly, dorsal rather weakly, defined, the latter traceable to about apical fourth, lightly deflected outwards towards apex, with well distributed but obscurely defined puncturation. Abdomen with puncturation more clearly defined than on elytra, with two medio-basal carinules. Metasternum widely impressed down middle. Undersurface of abdomen armed with two lamelliform protuberances at apex of second segment, these placed near together about the middle, and produced backwards, overhanging the third and part of fourth segments, thence recurved abruptly outwards, their apices rounded; fifth segment greatly constricted in middle, sixth almost wholly occupied by a very large and deep excavation. Legs with femora robust, and anterior tibiae toothed internally near apex.

Length, 2.75 mm.

♀ Similar, but with antennae normal; front tibiae unarmed, non strigose portion of head not punctate, apices of each elytron lightly rounded, abdominal puncturation rather indistinct and undersurface of abdomen convex.

Habitat.—Victoria: Healesville, in moss. (F. E. Wilson). Eltham (C. Oke).

The only Australian species of *Rybaxis* with strigose head.

Type in author's collection.

RYBAXIS LONGIPILOSUS, n.sp.

♂ Reddish-castaneous, elytra and appendages paler; clothed with long, erect, somewhat sparse pale pubescence.

Head, with apical three-quarters covered on disc with a close meshwork of very large shallow punctures, basal quarter almost impunctate, with a round fovea on either side of middle at about basal quarter; antennae of moderate length, joint 1 rather stout, sub-cylindric, 3, 4, 5 each lightly increasing in width from base to apex, 3 slightly longer than 4, and 5 than 3, 6 shorter than but slightly wider than 5, 7 a little wider but slightly shorter than 6, 8 sub-quadrate, much shorter than 7, 9 to 11 forming a moderate club, 11 rather sharply pointed, a little bent and about equal in length to the two preceding joints together. Prothorax transverse, rather strongly convex, sides strongly rounded, widest a little in advance of middle, the two lateral foveae connected by a strongly-defined

groove, much as in the preceding species, in front of groove with disc coarsely longitudinally strigose, behind rather sparsely punctate. Elytra transverse, apical margin of each elytron produced in middle, dorsal striae traceable to about apical fourth, its apex lightly deflected outwards, with sparse moderately defined punctures, epipleural furrow arising from a small round fovea at about basal fourth and terminating a little before apical fourth. Abdomen about width of elytra at their widest part, with two somewhat indistinct medio-basal carinules. Metasternum widely impressed down middle. Intermediate trochanters each with a small tooth. Abdomen with second ventral segment armed at apex with a wide lamelliform protuberance overhanging the third segment, and then abruptly recurved outwards, evenly rounded at apex; apical segment almost wholly occupied by a very large and deep excavation. Legs with front femora stout, front tibiae with an internal tooth towards apex.

Length, 3 mm.

♀ Similar, but tibiae, trochanters and ventral segments unarmed. Undersurface of abdomen convex, but ultimate segment lightly bi-impressed.

Habitat.—Victoria: Ringwood, (F. E. Wilson and C. Oke), Fern-tree Gully (C. Oke), Lakes' Entrance (F. E. Wilson).

This species frequents moss growing on the ground in damp situations.

Type in author's collection.

Var. picea.

Size smaller (2.5 mm.). Dark brownish-black, elytra except for a large discal infuscation on basal half (which sometimes extends down the suture), and appendages, dark castaneous; undersurface piceus.

A number of specimens both mature and immature are before me, but though in size and general colouration looking very different from the typical form, I am unable to distinguish any marked character by which to separate them. Some specimens are a little less pilose and a little more nitid than in the typical form, but others again agree very well in these respects. The immature specimens are wholly flavous.

Habitat.—South Australia: Myponga (A. H. Elston).

RYBAXIS MIRABILIS, n.sp.

♂ Pale castaneous, elytra and appendages slightly paler; sparsely clothed with short pale pubescence.

Head about as long as wide, lightly impressed between antennae, with fairly large and evenly distributed punctures, with two prominent round inter-ocular foveae; antennae with joint 1 a little wider than 2, and about as long as 2 and 3 combined, 3 and 4 subequal, narrower than 2, 5 longer than 4, 6 as long as 5, and slightly wider, 7 shorter, but wider than 6, 8 much shorter, 11 lightly bent, and about as long as 9 and 10 combined, the last three forming a fairly

strong club. Prothorax very lightly transverse, convex, sides strongly rounded to about middle, thence to base very lightly bisinuate, transverse basal groove and lateral foveae as in *strigicephalus*, in front of groove with disc coarsely longitudinally strigose, behind with punctures as on head. Elytra lightly transverse, apical margin of each elytron produced about middle, sutural and dorsal striae well defined, the latter very lightly deflected outwards at their apices; epipleural furrow very distinct, arising from a small roundish fovea at basal and terminating at apical fourth, puncturation well distributed, but somewhat obscure. Abdomen about equal in width to elytra at their widest, with two short medio-basal carinules, puncturation much as on elytra. Metasternum widely and somewhat deeply impressed down middle. Anterior trochanters rather strongly toothed. Undersurface of abdomen with second segment impressed on disc and with two medio apical lamelliform protuberances, these lightly overhanging the following segment and then recurved strongly outwards, their apices rounded, and their bases lightly connected, fourth segment at sides with two subapical lamelliform protuberances directed obliquely backwards, apex of segment straight across middle, and forming the basal margin of a large cavernous apical excavation with straight diverging sides. Legs with femora fairly stout, the anterior ones with a blunt tooth a little nearer base than apex; front tibiae straight, increasing in width from base to about apical fourth, thence suddenly constricted, thus forming a blunt tooth; intermediate tibiae narrower, lightly arcuate and weakly constricted just before apex, hind tibiae much inflated on apical half, and strongly notched close to apex, much excavated on side in neighbourhood of notch.

Length, 3 mm. (vix).

♀ Similar, but a little smaller, with an additional small fovea on disc immediately behind inter-ocular foveae, no armature on femora, tibiae normal. Abdomen beneath convex.

Habitat.—Victoria: Lakes Entrance (F. E. Wilson).

This species, of which I collected ♂♂ ♀♀ from moss growing on the ground, is readily distinguished from its allied species by the remarkable armature of the ♂ ventral segments.

Type in author's collection.

RYBAXIS STRIGICOLLIS, Westw.

This fine species was described in Trans. Ent. Soc. Lond. 1856, p. 269, and a very excellent figure is given in Plate 16, f. 1. It is in my experience a very rare insect. Westwood records Melbourne as the type locality, his specimen having been taken in association with ants. My unique example was secured from a nest of the ant *Iridomyrmex nitidus* at Ringwood, near Melbourne. The antennal club alone serves to distinguish it from its allied species, as the 9th and 10th joints are black, forming a striking contrast to the other pale joints. The eleventh joint is also rather strongly bent.

Westwood's specimen must have been a female (he does not state the sex), and the following well marked male characters should be associated with his description.

The metasternum is widely and rather deeply impressed down the middle, and the anterior trochanters have a minute tubercle on their outer edges, near their points of insertion with the coxae. The undersurface of the abdomen has the second segment armed with a lamelliform protuberance similar to that found in *longipilosus*. Immediately behind this there is a wide, shallow depression, which extends to the apex of the abdomen. The front tibiae are also armed with an internal tooth toward their apices.

R. strigicollis, and the three allied species here described, which might appropriately be termed the "strigicollis group," may be conveniently tabulated from characters of their uppersurface as follows.

A. Prothorax and head longitudinally strigose.

strigicephalus.

A.A. Prothorax only longitudinally strigose.

B. Antennae with two subapical joints very much darker than the rest, apical joint markedly bent.

strigicollis.

B.B. Antennae not so.

C. Clothing consisting of long, somewhat sparse, hairs.

longipilosus.

C.C. Clothing consisting of short hairs.

mirabilis.

RYBAXIS OTWAYENSIS, n.sp.

♂ Castaneous, elytra and appendages slightly paler, moderately clothed with short pale pubescence.

Head about as long as broad, lightly attenuate in front, incised at sides for the reception of eyes, inter-oculate foveae very prominent, with a shallow inter-antennal impression, and small but evenly distributed punctures; antennae with joint 1 cylindric, viewed from above a little shorter than 2 and 3 combined, 2 subovate, narrower than 1, 3-7 more or less elongate, subequal in width, 5 longer than the adjacent joints, 8 much shorter and lightly narrower than 7, 9 a little longer and broader than 8, 10 trapezoidal, not much longer than 9, 11 equal in length to 9 and 10 combined, curved, acuminate. Prothorax lightly transverse, convex, sides broadly rounded to their widest part just before middle, thence lightly rounded to base, base a little rounded, transverse groove joining lateral foveae pronounced, more angulate hindwards than usual; puncturation rather strong and evenly distributed. Elytra transverse, apical margin of each elytron produced in middle; dorsal striae strongly defined, passing apical fourth, their apices deflected outwards; puncturation a little less distinct than on prothorax. Abdomen rather long, a little narrower than elytra at their widest, segments strongly margined, no medio-basal carinules. Metasternum broadly depressed down middle, with two small, round, fascicle filled foveae immediately behind intermediate coxae. Anterior trochanters with a minute tooth near base in front, intermediate with a prominent curved tooth at base behind. Undersurface of abdomen

with a wide, somewhat shallow excavation common to the second, third and fourth segments, fourth segment with a median subapical lamelliform protuberance directed obliquely backwards, broader at base than apex, which is somewhat truncated; apical segment lightly transversely impressed at base. Legs with femora robust; anterior tibiae robust, lightly arcuate, toothed internally just in front of middle; intermediate tibiae with a similar, somewhat more pronounced tooth just before middle, posterior much longer, thin, and lightly curved.

Length, 2.5 mm., approx. (my specimen is bent somewhat).

Habitat.—Victoria: Lorne, in moss. (F. E. Wilson).

Type unique, in author's collection.

RYBAXIS SIMILIS, n.sp.

♂ Very close to *otwayensis*, but differs in having an additional small sub-median tooth on its anterior trochanters, and in the very different structure of its second ventral segment. This, at its apex, is straight across the middle half, but on either side of the straight portion it is produced in the form of a thin plate continuing the same plane as the rest of the segment. Apparently the plate is continuous right round the dorsal surface. Being somewhat transparent ventrally it is possible to discern the normal margin of the segment beneath it. The basal abdominal excavation is also a little more pronounced than in the preceding species.

Length, 2.5 mm.

Habitat.—Victoria: Lorne, in moss. (F. E. Wilson).

This species can only be distinguished from *otwayensis* by the characters of its undersurface. In fact, I had the two specimens mounted on the same card as being identical.

Type unique, in author's collection.

RYBAXIS CRASSIPES, Lea.

Proc. Linn. Soc. N.S.W., 1910, p. 735.

I have recently taken a specimen of what almost certainly appears to be this species, from tussocks of snow grass growing on the summit of Mount Donna-Buang, Victoria. Mr. Lea's specimen was taken at Zeehan, Tasmania.

COLLACEROTHORAX SPINICOLLIS, n.sp.

♂ Dark reddish-castaneous; legs, palpi and apical joints of antennae a little paler; uppersurface generally clothed with long black hairs, but on the head and prothorax particularly; there is also a shorter pale pubescence, this most noticeable along the median lines, and in the prothoracic excavations; undersurface with pale decumbent pubescence.

Head a little elongate, with well-marked antennal tubercles, immediately behind which it is strongly constricted; deeply excavated along median line, excavation bordered on either side by a prominent

ridge terminating posteriorly in an acute tooth directed obliquely backwards, between the ridges and the eyes there is on either side a rather deep longitudinal excavation, rounded in front and bordered posteriorly by another shorter tooth directed obliquely backwards, both median and lateral excavations filled with pale pubescence; with numerous moderately defined punctures; antennae of moderate length, club of three joints, apical joint pointed. Prothorax broader than head, sides much widened on their apical halves and recurved into the form of a strong spine which is itself toothed, and which is directed upwards, a little outwards and a little backwards. On either side of prothorax is a wide, deep excavation, which forms a rather sharp edge with the uppersurface, thus making the whole discal area look like a raised shield; with puncturation as on head. Elytra a little transverse, sutural striae deep, dorsal well marked to about apical third; puncturation irregular, and not very distinct. Abdomen at widest wider than elytra, second and third segments with a very short black carina on either side, placed nearer the outer margin than the centre. Legs unarmed.

Length, 2.5 mm.

Habitat.—Victoria: Ringwood, Beaconsfield, Healesville, (F. E. Wilson).

Type in author's collection.

This insect is undoubtedly congeneric with *C. sculpticeps*, Lea², although its second abdominal segment is not tricarinate. The armed prothorax and different abdominal carination readily distinguishes it from that species. The antennal club differs greatly from Mr. Lea's species, the ninth and tenth joints being much less markedly transverse, and the eleventh joint being pointed instead of widely rounded. Owing to the rather dense pubescence it is somewhat difficult to see the sculpture of the head and prothorax. All my specimens were taken in damp moss growing on the ground.

SCHISTODACTYLUS ARMIPECTUS, n.sp.

♂ Castaneous, elytra and appendages paler; antennal joints 7-10 inclusive strongly infuscated; somewhat sparsely clothed with pale decumbent pubescence.

Head about as long as broad, lightly impressed between antennae, with two somewhat indistinct inter-ocular foveae; with dense, very clearly defined, punctures, becoming more sparse on disc near base; antennae with joint 1 cylindric, longer than 2 and 3 combined, 2 broader and scarcely perceptibly longer than 3, 4, 5, 6 and 7 decreasing in length, 8 wider and a little shorter than 7, 9 much wider than 8 and slightly longer, 10 wider and shorter than 9, 11 subovate, longer than 9 and 10 combined, and forming with them a three jointed club. Prothorax about as long as wide, widest at about apical third, sides strongly rounded to their widest part, thence almost straight to base which is subequal in width to apex; puncturation as on head. Elytra

2. Proc. Linn. Soc. N.S.W., 1911, Vol. xxxvi., pp. 451, Pl. xvii., f. 2, 3, 4.

short, rounded at shoulders, strongly dilated to apex; dorsal striae traceable to about apical third, both sutural and dorsal striae arising from minute foveae; with puncturation about same size but not quite so distinct as on prothorax. Abdomen about twice as long as elytra, widest at apex of second segment, on either side of which there is a rather deep fovea. Metasternum impressed in middle; with scattered punctures. Prosternum with a small conical tubercle on either side, these surmounted with a long sharp seta. Anterior trochanters about middle, and anterior femora near base, armed with a long, thin spine, the femoral ones being slightly longer. All tibiae rather strongly curved near apex. Tarsi with third joint slightly longer than the second, and armed with two unequal, widely diverging claws. Undersurface of abdomen slightly flattened along centre, with a shallow transverse fovea on sub-apical segment, this segment rather strongly produced in centre.

Length, 1.75-2 mm.

Habitat.—Victoria: Mt. Donna Buang, Belgrave, (F. E. Wilson).

This description will be found almost identical with that of *brevipennis*, Lea³, but the fact remains that it agrees in practically every character with that species except that it has the additional armature on the prosternum. This, however, is very distinct, and is constant in all my examples. Its palpi are as in *brevipennis*, but the two spines on the sub-basal joint are about equal in length. The spine at the apex of the ultimate joint is much longer than its accompanying seta, and near the apex there are also a few very much finer setae or hairs.

Two specimens that are almost certainly females, are a little larger and have the undersurface of the abdomen much more convex, particularly on the basal segments. My examples from Mt. Donna Buang were secured from tussocks of snow grass growing on the summit, and a single example from Belgrave was sieved from moss.

Type in author's collection.

SCHISTODACTYLUS FOVEIVENTRIS, n.sp.

♂ Differs from *armipectus* in having the antennal joints 1-10 almost concolourous, and 11 very little lighter than 10; in its vestiture being a little sparser, its head more punctured on disc near base, in its less pronounced inter-ocular foveae, and in the very different undersurface of its abdomen. The first segment is very convex and declivous at apex, the third very narrow and constricted in the middle. It overhangs the base of a large cavernous fovea which extends to the apex of abdomen. The sub-apical segment only appears as a triangle on either side of the fovea. Apex of abdomen sharply produced. The transverse rows of punctures on the ventral segments are much stronger also than in *armipectus*. Apical joint of maxillary palpus furnished at apex with a spine not accompanied by a strong seta.

3. Proc. Linn. Soc. N.S.W., Vol. xxxv., (4), p. 771, Pl. xxi., f. 10.

Length, 2 mm.

Habitat.—New South Wales: Blue Mountains, (Dr. E. W. Ferguson).

In the Proc. Linn. Soc. N.S.W., Vol. xxxvi., (3), p. 455, Mr. A. M. Lea records Blue Mountains, N.S.W., as a new locality for *Schistodactylus brevipennis*, Lea, on the strength of a specimen in Dr. Ferguson's collection. This specimen is the one upon which I have founded the above description. It was gummed right side up upon a card so that none of its undersurface or palpi were visible. As the uppersurface is almost identical with that *brevipennis* it is easy to see how Mr. Lea mistook it for that species. The discovery of *armipectus* so markedly resembling *brevipennis* in the characters of its uppersurface, led me to wonder if this specimen might also have an armed prosternum. On floating it off and cleaning it, I found that it was still another new species. It will thus be seen that for positive identification of a *Schistodactylus* it is absolutely essential to examine the characters of the undersurface.

For this interesting species together with many other fine *Pselaphids*, I am indebted to the generosity of my friend, Dr. E. W. Ferguson.

Type in author's collection.

The genus now comprises four species, viz., *phantasma*, Raff., from Western Australia, *brevipennis*, Lea, from Tasmania, *armipectus*, n.sp., from Victoria, and *foveiventris*, n.sp., from New South Wales. These may be tabulated as follow:—

A. Apical joint of palpi simple at extremity.

phantasma, Raff.

A.A. Apical joint of palpi not simple at extremity.

B. Apical joint of palpi with a spine and a strong seta at extremity.

C. Prosternum unarmed. *brevipennis*, Lea.

C.C. Prosternum armed. *armipectus*, n.sp.

B.B. Apical joint of palpi with a spine, but no strong seta at extremity. *foveiventris*, n.sp.

PALIMBOLUS ARMATIPES, n.sp.

♂ Reddish castaneous; legs, palpi and elytra slightly paler; with somewhat sparse lightly golden pubescence, shorter and more decumbent on prothorax than elsewhere.

Head strongly convex, very slightly longer than broad, with two small round foveae, one on either side close to eye, and a discal fovea a little in advance of these; midway between discal fovea and antennal ridges with a deep transverse fovea; inter-antennal region raised; eyes moderately prominent; puncturation sparse and minute; antennae moderately long, joint 1 cylindric, viewed from side longer than 2 and 3 combined, 2 slightly longer than 3, 4 and 5 much broader, the latter being a little longer and broader than the former, both widened internally, 6, 7, 8, subequal and narrower than 5, 9 and 10 about equal in length to 5, but wider, the latter lightly wider than the

former, these together with 11 forming a three jointed club, 11 wider than 10, and nearly twice as long, subovate, bluntly pointed. Prothorax as broad as long, widest just before middle, with a strong longitudinal basal fovea and two round lateral foveae on either side, one basal and one submedian; puncturation as on head. Elytra transverse, with four basal foveae; rather strongly raised at shoulders. Metasternum with two prominent tubercles close together on disc midway between posterior and intermediate coxae, each tubercle crowned with a small bunch of hairs. Undersurface of abdomen with a wide shallow impression down middle, apex of fourth segment on either side at outer edge with a prominent lamellated ridge or tooth directed obliquely hindwards, its axis longitudinal. Intermediate and posterior trochanters bluntly toothed. Four front femora stout, hind femora each with a prominent black carina traversing slightly less than the middle half of its uppersurface, inner basal halves deeply excavated, excavation apically overhung by a wide thin plate. Hind tibiae strongly arcuate, each with a blunt oblique protuberance or tooth near base, this crowned with long fasciculate setae, a very prominent sharp tooth on inner edge of uppersurface at about middle, and a shorter sharp tooth on inner edge of lowersurface a little nearer base. Legs with puncturation rather stronger than elsewhere. Inner claw of anterior tarsi trifid.

Length, 2.8 mm.

♀ Differs in having joints 4 and 5 of antennae not appreciably wider than 3, abdomen not impressed beneath; no armature on legs and ventral segments.

Habitat.—Victoria: Healesville (F. E. Wilson), Belgrave (F. E. Wilson and C. Oke).

This species seems to have affinities with *mamillatus*, Lea⁴, in its tuberculate metasternum, and *leana*, Raff.⁵ in the possession of a sub-basal tooth on its hind tibiae. Its very remarkable hind femora and tuberculate metasternum, however, serve easily to distinguish it from the latter species, and the armature of the hind tibiae readily separate it from the former.

It is sometimes a difficult matter on mounted specimens, however well set, to see the lower submedian tooth on the hind tibiae, although the upper one is always prominent. This latter, viewed from some directions, is seen to be somewhat lamelliform as in *victoriae*,⁶ King. Also from some directions the fourth and fifth antennal joints do not appear to be anything like as wide as they actually are.

My Healesville specimens were taken from moss growing on old logs, and those from Belgrave were sieved from fallen leaf debris.

Type in author's collection.

PALIMBOLUS ROBUSTICORNIS, n.sp.

♂ Dark reddish castaneous, elytra and appendages paler; lateral margins of prothorax black or infuscated on their anterior halves;

4. Proc. Linn. Soc. N.S.W., Vol. xxxvi. (3), p. 449, Pl. xvii., f. 1.

5. Proc. Linn. Soc. N.S.W., Vol. xxv. (2), p. 223, Pl. x., f. 38.

6. Trans. Ent. Soc. N.S.W., 1865, p. 168, Pl. x., f. 39.

with rather dense lightly golden pubescence, this shorter on head and prothorax.

Head as long as broad, strongly impressed between antennal ridges, with two well marked inter-ocular foveae, placed well up on disc, and a faint impression on disc near base; with sparse indistinct punctures except on antennal ridges where they are very coarse; antennae of moderate length, very robust, joint 1 viewed from the side, as long as 2 and 3 combined, 2 slightly narrower than 1, almost moniliform, 3 as long as 2, widened from base to apex, 4-8 of equal width, lightly transverse, 5 a little longer than adjacent ones, 9 and 10 transverse, subequal, much wider than 8, 11 wider than 10 and about equal in length to the two preceding combined, subovate, lightly hollowed out on undersurface at base; all joints very coarsely punctured. Prothorax lightly transverse, rather more widened than usual on its apical half, with a strong medio-basal fovea, and two round lateral foveae on each side, one basal and one submedian; puncturation as on head. Elytra strongly transverse, sides increasing in width to near apex, with well marked sutural striae, and a short but wide basal impression on either side, midway between suture and lateral border; puncturation as on prothorax. Abdomen rather long, wider than elytra. Metasternum much raised in front, with two small, somewhat transverse tubercles near together in disc, immediately behind intermediate coxae; between these and posterior coxae the surface is strongly declivous, and somewhat excavated. Hind trochanters very feebly armed. Undersurface of abdomen strongly flattened, lightly excavate near apex. Hind tibiae gradually inflated internally to about the middle, thence becoming rather suddenly reduced in width, from some angles the internal inflation seems to take the form of a carina.

Length, 3.3 mm.

♀ Similar, but with hind tibiae normal and abdomen convex beneath.

Habitat.—Victoria: Warburton, in tussocks (F. E. Wilson), Belgrave, in moss (C. Oke and F. E. Wilson).

Type in author's collection.

PALIMBOLUS PACIFICA, n.sp.

♂ Rather slender, flavous; antennae and abdomen slightly darker; head and prothorax sparsely clothed with moderately long pale pubescence, that on elytra longer and a little darker, appearing almost black in some lights; abdomen densely pubescent.

Head as wide as long, inter-antennal ridges rather broad, and coarsely punctate, with a deep impression between them; inter-ocular foveae strongly defined, placed well up on disc; puncturation sparse, larger on base and sides, smaller on disc; antennae of moderate length, joint 1 subcylindric, viewed from the side, larger than 2 and 3 combined, 2-6, subequal; subquadrate, lightly narrower than 1, 7 and 8 about as long as 6 but slightly increasing in width, 9 about one and a-half times larger than 8, dilated towards apex, 10 of

similar shape as 9, but a little wider and noticeably shorter, 11 narrower at base than 10, lightly curved, obtusely pointed and a little shorter than 9 and 10 combined, all joints with numerous punctures, those on basal ones being the larger. Prothorax transverse, sides widest about middle, medio-basal impression strong, lateral foveae three in number on each side, one near base, one near apex, and one submedian; punctures fairly numerous, evenly distributed, similar to those on disc of head. Elytra strongly convex, transverse, evenly rounded at shoulders, then gradually increasing in width to near apex, with a large basal impression on either side, midway between suture and lateral border, a round fovea at base of sutural striae, and these impressions; puncturation indistinct, almost wanting on disc. Abdomen about as long as, but a little narrower than elytra, its margins pronounced, and with puncturation stronger than on elytra. Metasternum a little impressed along middle of its apical half, minutely punctured, and almost glabrous on disc of its basal half, with a small round fovea filled with hairs, immediately behind intermediate coxae. Undersurface of abdomen flattened, with a very small and indistinct impression on apical segment. Maxillary palpi with apical joint strongly inflated inwardly on its basal two thirds, sharply pointed at apex, somewhat hollowed out beneath.

Length, 2.8 mm., breadth, 1.1 mm.

Habltat.—Victoria: Lakes Entrance, in moss, (F. E. Wilson).

This interesting species differs in two main characters from all other species of the genus, firstly in possessing no armature, and secondly in the very different structure of the apical joint of the maxillary palpus. At first glance I was inclined to exclude it from the genus, in spite of its *Palimboldus* like facies. What decided me to include it, however, was that, like the males of all other *Palimboldus* known to me, it has the inner tarsal claws on the anterior tarsi trifold.

This character has apparently not been previously commented upon, and my attention was first called to it by Mr. A. M. Lea, who showed me a specimen of a *Palimboldus* from the late Canon Blackburn's collection, to which was attached a note stating that the front claws were trifold. Species which I know to have this character are *mirandus*, Sharp, *victoriae*, King, *leana*, Raff., *foveicornis*, Lea, and the new species here dealt with. I think that upon examination all the other species also, will be found to have trifold claws.

Type in author's collection.

PALIMBOLDUS? MINOR, n.sp.

♂ Dark reddish-castaneous, palpi paler; moderately clothed with short pale pubescence.

Head very lightly transverse, rather strongly narrowed in front of eyes, raised and very convex on basal half; inter antennal elevations not very pronounced, with a very shallow impression between them; with close, but indistinct punctures much obscured by clothing; eyes placed far back, prominent; antennae with joint 1 subcylindric, about

equal to 2 and 3 combined, 2 cylindric narrower than 1 and slightly longer than 3; 3, 4, 5 subequal, 6 a little shorter than 5, 7 slightly longer than adjacent ones, 9 much wider than 8, slightly transverse, 10 a little longer and wider than 9, 11 longer than 9 and 10 combined, subovate, rather strongly pointed, the last three forming a pronounced club. Prothorax lightly elongate, very convex on disc, widest just in front of middle, with a wide medio-basal longitudinal fovea and three round lateral foveae, one each near base and apex, and one submedian, on either side; puncturation as on head. Elytra lightly transverse, sides evenly rounded to their widest part just before apex; strongly convex; sutural striae well marked; with a short basal impression on either side about midway between suture and lateral margin; with numerous minute punctures. Abdomen slightly narrower than elytra, lateral margins pronounced; with puncturation as on elytra. Metasternum with two prominent conical tubercles placed side by side on disc midway between intermediate and posterior coxae, behind tubercles with surface depressed down middle. Undersurface of abdomen a little flattened. Intermediate tibiae with a strong subapical internal tooth. Trochanters unarmed. Maxillary palpus with the three apical joints inflated externally, apical joint bluntly pointed and with several small setae at its apex, and along its inner margin. Front tarsi with inner claw trifid, hind tibiae almost straight. Femora rather stout.

Length, 1.75 mm.

Habitat.—Victoria: Fern Tree Gully, (F. E. Wilson).

A very aberrant species with head somewhat like that of a *Rytus*, strange palpi, and armed intermediate tibiae, but nevertheless I think best left in *Palimbolus*. Its palpi approach more those of *pacifica* than any of the other species. Its armed intermediate tibiae should serve to easily distinguish it from all other species.

Type unique, in author's collection.

EROTYLIDAE.

THALLIS ATRICORNIS, n.sp.

Flavous tinged with red; glabrous, nitid. Head less a medio-basal spot, two very large blotches on either side of prothorax, connected at their bases by a thin line traversing the basal margin, scutellum, a large circum-scutellary area, shoulders, a broad irregular median fascia with front margin angularly depressed at suture, a large blotch on either side at about apical third, each narrowly connected with a large median blotch, which is triangular in shape on its front margin and posteriorly, gradually narrowed to the apex of elytra, black. Undersurface black, except prosternum, and apical segments of abdomen. Femora black at apex, diluted with red elsewhere; tibiae and antennae black; tarsi obscurely reddish.

Head with numerous distinct punctures in front, more sparse elsewhere; antennae of moderate length, joint 3 about one and one fourth longer than either 2 or 4, 8 a little wider than 7, 9 and

10 about twice as wide as long, 11 a little longer than broad, widely rounded at apex. Prothorax a little more than one and one fourth times broader than long, its apex truncate in middle, sides very lightly rounded, with a strong notch on each side of apical margin, lateral furrows obsolete, basal furrow moderately distinct at sides, with punctures much as on base of head, but a little more evenly distributed. Elytra wider than prothorax, parallel-sided to about apical third, with regular rows of well defined punctures, becoming somewhat obscured on apical declivity, with a few extremely minute punctures on interstices. Prosternum with numerous distinct punctures on disc, almost impunctate in front and behind; intercoxal process a little widened and broadly rounded at apex. Metasternum with a longitudinal sulcus on disc, beginning at apex and traceable a little beyond the middle, with punctures very much larger at sides than on disc. Legs of normal length; front femora with two rows of finely serrated ridges on undersurface, serrations more prominent towards apex where they take rather the form of blunt teeth.

Length, 7 mm.

Habitat.—Queensland.—Mt. Tambourine (H. L. Pottinger).

This species appears to be most closely allied to *serratipes*, Lea,⁷ but amongst other things it differs from the description of that species in having no well defined lateral prothoracic furrows, by the elytral punctures not being in shallow striae, in having a double instead of a single serrated ridge on the undersurfaces of the front femora, and in having legs of normal length.

Type in author's collection.

MALACODERMIDAE.

HYPATTALUS QUEENSLANDICUS, n.sp.

♂ Head black, with muzzle flavous, antennae with joints 1-4, and apical half of 11 infusate, the rest black; prothorax, base and apex of elytra broadly, suture very narrowly flavous, rest of elytra dark bluish black; all appendages flavous.

Head transverse, highly polished and smooth, with two faint longitudinal impressions on either side between antennae; antennae reaching about middle of elytra, joints 4-10 feebly serrate internally, joint 11 a little pointed, and about one and one-quarter longer than 10; prothorax impunctate, broadest at about apical third, apex arcuate outwardly, basal angles rounded, with a rather strong marginal impression widely bordering the base, and continuing around the sides to about the middle; elytra about $2\frac{1}{2}$ times longer than head and prothorax combined, convex, feebly but regularly increasing in width to its broadest portion at about apical fourth; with a strong longitudinal impression on either side at lateral margin, beginning near shoulders and becoming deepest and broadest at about position of hind coxae; with strong and fairly close punctures on dark parts becoming

7. Records of the S. Australian Museum, Vol. ii., No. 2, p. 291.

a little sparser and less apparent elsewhere. Scutellum invisible. Legs long and thin, anterior tibiae feebly, posterior very strongly, arcuate.

Length, 3.75, width 1.5 mm.

Habitat.—Queensland: Blackall Ranges, (F. E. Wilson).

Type unique, in author's collection.

In Lea's table of species, Trans. Ent. Soc. Lond., 1909 (1), p. 169, this species would come under the same heading as *alphabeticus*, Lea, but the impunctate head, and prothoracic and elytral impressions, amongst other things should serve easily to differentiate it from that species.

CERAMBYCIDAE.

Sub-family PRIONINI.

ELAPTUS PILOSICOLLIS, n.sp.

♂ Uniformly light brown, nitid; apex and margins of mandibles, jugular processes, knees, and margins of tibiae and tibial spurs, black or darker; undersurface slightly paler; head, portions of mandibles, prothorax, scutellum, femora, tibiae, and all the undersurface except the ventral segments covered with a long erect golden pubescence; clothing of ventral segments a little shorter and more decumbent. Elytra apparently glabrous, but viewed from the side seen to be furnished with sparse very minute setae.

Head rather small, with a fairly well defined sulcus on disc, puncturation rather sparse on disc, much closer together on clypeus and behind eyes; eyes rather wide apart; mandibles sharply pointed, with numerous punctures on their paler portions; antennae reaching apical third of elytra, scape barely over-reaching hind margin of eye, and stouter than joint 3, joints 1 and 2 somewhat closely and coarsely punctured, almost glabrous and nitid, the rest, with the exception of a small nitid spot at the apex of the 3rd, 4th, 5th, and 6th joints, covered with a very minute puncturation, and a depressed pubescence, giving them an opaque appearance.

Prothorax 4.5 x 7 mm., convex, and depressed forward, broadest at about basal third, and lightly decreasing in width towards apex, sides lightly marginate, and evenly rounded to meet basal and apical margin, apical margin lightly advanced in centre; median sulcus almost obsolete, midway between it and the lateral borders are two obscurely defined depressions, the whole closely punctured generally, but becoming a little less frequent towards the front of disc; basal and apical margins ciliated.

Elytra at base broader than prothorax, gently decreasing in width towards apex, with five somewhat obscure costae on each elytron, the first and third being the most prominent; the whole covered with large round punctures, well defined except at extreme base. Scutellum a little transverse, and broadly rounded at apex, with fairly numerous though not well defined punctures. Prosternum, metasternum, and its episternums covered with a fine, very close puncturation, this becoming

sparser on centres of ventral segments. Front tibiae widened and furnished on their outer edges with a few very blunt teeth, directed forwards; the intermediate and hind tibiae have on their outer edges some minute spinous processes; femora and tibiae fairly strongly punctured.

Length, 25 mm.

♀ Differs from the ♂ in the following characters:—Prothorax a little broader, with sides showing a tendency towards angulation just behind the middle, and pubescence mostly confined to the sides and front margin, leaving the disc almost glabrous; antennae much shorter, barely reaching the middle of elytra, and much more slender, though the scape differs in being broader than the third joint; the puncturation of joints 3-7 inclusive is much coarser than in the ♂, and the nitid spaces at the apices of the joints are much more extensive and traceable to the 9th joint. The mandibles do not exhibit any sexual dimorphism. The front tibiae are armed with six rather sharp teeth, and the spiny processes on the other tibiae are rather more apparent; the tarsi are a little less widened than in the ♂.

Length (excluding ovipositor), 28.5 mm.

It is with some hesitation that I have placed this species under Pascoe's genus *Elaptus*, firstly, because of the armature of the front tibiae, (Pascoe says "tibiae haud dentatae,") and secondly because the prothorax differs in shape so much from all the other members of the genus.

There is a small ♂ before me measuring only 19 mm. in length in which the antennae almost attain the full length of the insect.

Habitat.—West Australia: Geraldton (J. Clark), 5 ♂ ♂ 1 ♀.

Types in author's collection.

Co-types 2 ♂ ♂ in collection of West Australian Museum, Nos. 7936, 268 (1916), 2 ♂ ♂ in collection of Mr. J. Clark. For my specimens of this species I am indebted to the generosity of my friend, Mr. J. Clark, of Perth.

CNEMOPLITES (HERMERIUS) INTERMEDIA, n.sp.

♂, Dark chestnut-brown, prothorax a little darker; head and prothorax sparsely clothed with short upright pale pubescence, this lacking on the smooth, glossy discal areas of prothorax; anterior tibiae strongly hirsute beneath on their outer halves, this character becoming less pronounced on the four hind tibiae; shoulders, slightly pubescent; undersurface of head and prothorax with clothing similar to that upon their dorsal surfaces; metasternum and its episternums densely clothed with a very much shorter, and somewhat decumbent golden pubescence, this almost wanting on disc, but possibly due to abrasion; the brushes of the ventral segments are very dense and golden in colour, and semi-lunar in shape on the first four arches; on the last segment the hairs are shorter, and occupy a fairly large zone around the vent.

Head, moderate, disc coarsely punctured, punctures tending towards confluency; mandibles strong, coarsely punctured on their lateral declivities; antennae reaching apical third of elytra, joint 1 over-reaching apical margin of prothorax, a little longer than 3, 3 one and one-half times longer than 4; on joint 1 the puncturation is fairly close and strong, but on the other joints they become increasingly more fine and sparse; internal keel of joints only traceable on the two apical joints. Prothorax about one and three-quarter times broader than long, depressed on disc, sides declivous, lateral borders generally rounded, but crenulate or bluntly toothed, and with a small slightly upturned lobe at apical angle, towards the base the teeth become somewhat longer, but this is apparently variable, as it is more noticeable on the left side than on the right; the depressed discal area is highly polished; the puncturation which covers all the surface except a spot just above the basal centre, and two large spaces on either side of the discal impression, is very coarse, becoming somewhat rugose at the sides; the anterior border is rather strongly arched inwards about the middle, and the posterior is weakly margined. Elytra rather short, convex, wider at base than prothorax, spined at sutural angles, somewhat smoothly punctured, and glossy on basal half about suture, rugose elsewhere. Scutellum bluntly pointed behind, sparsely punctured except on a longitudinal band on basal half. Front femora coarsely granulate above, granules becoming almost spinose in parts, more finely granulate beneath; intermediate and posterior femora almost smooth above, undersurface of intermediate with sparse fine granules, and of posterior with sparse punctures; front tarsi much widened; front tibiae rather broadly channelled down the centre of the uppersurface.

Length, 48 mm.

Habitat.—New South Wales: Grenfell (T. G. Sloane).

This species seems to fall between the other two forms assigned to the sub-genus *Hermerius*, viz., *impar*, Newm., and *howei*, Thoms. I have not been able to gain access to Newman's description of *impar*, but have had to rely upon the notes given by Lameere, who examined the types at the British Museum. My species differs from *impar* in having the third antennal joint not nearly twice the length of the fourth, the internal keel of the antennal joints not rather prominent, the elytra not without spines at sutural angles, and the femora not rugose throughout. These distinctions, together with the possession of the depressed prothoracic discal area, with its nitid smooth spaces should serve to distinguish it from Newman's species.

From *howei* it differs in being larger, in having the elytra not granulate, the body not generally pubescent above, the third antennal joint not longer than the first, nor twice the length of the fourth.

Type in author's collection.

For my specimen I am indebted to the kindness of my friend, Mr. T. G. Sloane, of Young, N.S.W.